these regions, and on an effort to better understand the challenges that Indian RTTs face. Not surprisingly, emphasized some of the same issues, namely, the need to treat high patient volumes and the need for improved implementation and training, particularly when it comes to software. "Clinical users in their areas deal with very high numbers of patients each day. They also deal with limited skilled resources to use, fast, and as safe as they can be made,"

Our objective is to come up with a set of guidelines for the career pathways, job roles at different level and the curricula for each level of the concerned profession. India's greatest challenge will be to accomplish this but: **The RTT management structure is majorly managed by senior policy makers from the medical fraternity, and provides very little scope for Technical professionals to participate in policy decision making and to bring about any reforms.**

Aims to provide world of RTTs with a global standard in the holistic care and treatment of patients as they undergo the radiotherapy process with optimum radiotherapy planning & treatment techniques to patients now and in the future. The accuracy with which each step is carried out can have an impact on both tumour control and normal tissue complications.

These factors mandate a high degree of accuracy in treatment delivery which depends on RTTs how he implemented and uses the Technology

However, the change in technology and the required technical skills in RT over the past 10 years have been extreme and have forced major reviews of the technical aspect of RTT. We believe that the outcome of this meeting will be very useful for strengthening the education and therefore the role of RTTs in India and across the Globe to develop & promote the profile of the RTT within the multidisciplinary team in different regions under different challenges and, bring the resolution to the 1. Evaluation of technology: Relevant endpoints from the perspective of the RTT, Are we geared to implement technology in India and Skills to implement technology Training programs in India. By 2020 RTTs of India will be more numerous, better educated, healthier and more prosperous than at any time in our long history.

Symposium with Proffered Papers: Rectal cancer: Optimal sequence of drugs and rays before and after surgery

SP-0608

Rectal cancer: optimal sequence of drugs and Xrays before and after surgery. What is the optimal sequence of drugs?

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Postoperative adjuvant chemotherapy is firmly established for patients in radically resected colon cancer with stage III and 'high-risk' stage II disease. In contrast, the debate continues to evolve on the benefit of postoperative adjuvant chemotherapy for rectal cancer patients after preoperative (chemo)radiation and TME surgery. Neither the indivividual phase III trials themselves nor the meta-analyses have provided a secure definitive answer for the benefit of postoperative adjuvant chemotherapy after SCPRT or CRT. Hence, several different strategies have been employed to escalate the intensity of chemotherapy in the neoadjuvant or preoperative setting.

1) Integrating additional chemotherapy/targetted agents into preoperative chemoradiation (CRT) schedules
2) Integrating induction chemo (IC) prior to CRT or short course preoperative radiotherapy SCPRT.
3) Integrating induction chemo (IC) alone as an alternative to CRT or SCPRT.

4) Integrating consolidation chemo (CC) after CRT or SCPRT.
5) Alternating/interpolating chemotherapy and split course radiotherapy (ACAR)
6) Combinations of the above

These strategies are explored individually and the relevant trials examined. The most frequent stragey has been concurrent chemoradiation and Phase III studies evaluated low-dose oxaliplatin (50-60mg/m2) as a radiosensitizer in patients with resectable cancers. This strategy increased acute toxicity, but showd no evidence for any consistent improvement in short-term endpoints such as pCR or long-term oncological outcomes. So alternative manoevres as above using oxaliplatin at full systemic doses are being explored to see if this tactic can improve DFS or OS in borderline/unresectable patients where the CRM is compromised or cancers with high risk features for metastatic disease such as EMVI.

Induction chemotherapy (IC) is a potentially useful therapeutic approach for locally advanced operable, primarily unresectable or borderline resectable rectal cancer. IC may be a more effective option for patients with rectal cancer who would require adjuvant chemotherapy according to clinical and histological parameters, and MRI-based imaging. The use of neoadjuvant systemic therapy in operable rectal cancer has potential advantages that include higher rates of sphincter-sparing surgery and the possibility of measuring early in-vivo response to systemic treatment. However, neoadjuvant treatment require a close collaboration between surgeons, medical oncologists, radiation oncologists, radiologists and pathologists.

SP-0609

What is the optimal sequence of rays?

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Preoperative radio(chemo)therapy is a preferable treatment because it is more effective and less toxic than postoperative radiochemotherapy. There are two schedules of preoperative radiotherapy: 5 x 5 Gy delivered over 5 days with immediate surgery used for resectable cancers and conventionally fractionated radiochemotherapy delivered over 5 weeks with surgery delayed for 6 weeks used for both resectable cancers and for cancers with threatened mesorectal fascia. There were several prospective and retrospective trials, systematic reviews and one meta-analysis that explored the issue of increasing the rest period between radiation and surgery. Stockholm III randomized trial that compared immediate with delayed surgery after 5 x 5 Gy showed a benefit in terms of lower rate of severe acute post-radiation toxicity in the immediate-surgery group. However, this benefit was counterbalanced by the increase in minor postoperative complications in the group with immediate surgery compared with that with delayed surgery. Long-term results are awaited. Regarding elderly patients who were unfit for chemotherapy, 5 x 5 Gy with delayed surgery produced favourable outcomes for cancers with threatened mesorectal fascia or for small cancers after full-thickness local excision. 5 x 5 Gy and consolidation chemotherapy during a long

interval to surgery is a promising treatment because the pathological complete response (pCR) rate of over 20% was recorded. The body of evidence from studies that used conventionally fractionated radiochemotherapy showed that, with a longer interval to surgery, the pCR rate and downstaging increased, whereas the R0 resection rate, the sphincter preservation rate and the long-term oncological outcomes remained much the same.
The desired effect of radiation, namely irreparable DNA damage which ceased clonogens division, occurs at the time of irradiation. A lengthening of the interval between radio(chemo)therapy and surgery does not produce additional DNA damage. With delayed surgery, there is a risk of tumour regrowth and the development of a cancer phenotype that produces distant metastases. Indeed evaluation of a labelling index showed the accelerated proliferation of cancer cells in some tumours one month after 5 x 5 Gy. PET/CT examinations demonstrated increased metabolic activity in some tumours between 6 and 12 weeks after chemoradiation. Thus, the long interval potentially jeopardizes oncological outcomes in up-front resectable cancers. This effect, however, was not shown in the randomized studies or in the meta-analysis.

OC-0610

Quality of life in patients undergoing radiotherapy and sphincter sparing surgery or rectal amputation

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Purpose/Objective: In patients with rectal cancer (chemo)radiotherapy is usually followed by low anterior resection (LAR) or abdominoperineal resection (APR) with permanent colostomy. Type of surgery depends on tumor localization, patient's condition and surgeons' preference. Until now, there is still debate which procedure is superior in terms of quality of life (QoL). In this study we compare QoL during the first six months of treatment in patients undergoing LAR and APR.
Materials and Methods: This study was performed in the context of the ProspectIve data CollectioN Iniative on Colorectal cancer (PICNIC) cohort. Within PICNIC patients fill out standardized QoL questionnaires at start of radiotherapy and every 3 months thereafter. In the present study, participants with rectal cancer who underwent curative surgery following radiotherapy between February 2013 and September 2014 were included. QoL was measured by means of EORTC QLQ-C30 and CR29, at baseline, 3 and 6 months. Responses were transformed to a longitudinal scale and reported as mean or median, depending on distribution. Mean differences in QoL scores were calculated and categorized as improved, stable and worsened. Differences in QoL were tested on significance with the Mann-Whitney U test and Chi-square test.
Results: One-hundred-fourteen patients were identified, 55 (48%) underwent APR and 59 (52%) LAR. Baseline characteristics between were similar for both groups, except for tumor location (90.9% vs. 28.8% located in lower third of the rectum for APR and LAR resp.) and T-stage (66.7% vs. 83.1% T3 tumors for APR and LAR resp.). At baseline, LAR patients reported a higher mean score for physical function (90 vs. 82, p= 0.008), role function (84 vs. 72, p= 0.008) and global health (75 vs. 66, p= 0.013) compared to APR patients. After 3 months, both groups reported similar differences in QoL function scales. At 6 months, global health recovered in APR patients to baseline levels or above (only 22.6% reported to worsen compared to baseline), while LAR patients showed slower recovery (with 43.5% worsened status). At 6 months, APR patients had worsened body image compared to LAR patients (mean difference -19 (-26.7 to -11.3) vs. -11 (15.8 to -6.8), p=0.01), but improved stool frequency (mean difference +18 (7.9 to 28.8) resp. -6 (-15.4 to 3.9) p=0.003). Regarding symptoms, LAR patients worsened on embarrassment for defecation pattern, while APR patients worsened on urine incontinence and impotence.
Conclusions: The impact of surgery type on QoL during the first six months in rectal cancer patients pretreated with (chemo)radiation is similar for most domains. However, patients who underwent APR seem to recover more quickly in respective of their global QoL before treatment. Symptom patterns were quite different between patients undergoing LAR or APR. These results can be helpful in counseling patients in treatment choice, giving the large differences in patients' perspective, lifestyle, and expectations of treatment.

OC-0611

Interim analysis of postoperative chemoradiotherapy for locally advanced rectal cancer: a phase 3 trial

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Purpose/Objective: To present an interim analysis of the trial of concurrent capecitabine and radiotherapy with or without oxaliplatin as adjuvant treatment for locally advanced rectal cancer.
Materials and Methods: This was a multicentre, open-label, randomized, phase 3 study in patients with pathological stage II-III rectal cancer. Patients were randomized to either radiotherapy 45-50.4 Gy/25-28 fractions with concurrent capecitabine 1600 mg/m^2 on days 1-14, 22-35 (Cap-RT group) or 45-50.4 Gy/25-28 fractions with capecitabine 1300 mg/m^2 on days 1-14, 22-35 and oxaliplatin 60 mg/m^2 on weeks 1, 2, 4, 5 (Capox-RT group). Randomization was done with computer-generated block-randomization codes stratified by centre and pathological stage (II vs. III) without masking. The primary endpoint was 3-year disease-free survival rate (DFS); secondary endpoints included overall survival rate (OS), locoregional failure free survival rate (LRFFS), distant metastasis free survival rate (DMFS), compliance, and safety. Safety and compliance analyses included patients as treated, efficacy endpoints were analysed according to the intention-to-treat principle. This study is registered with ClinicalTrials.gov, number NCT00714077.
Results: Providing 80% power to detect an increase of 3y-DFS from 65% to 75% (α=0.05, 2-tailed test), 570 patients were required. Between January 2008 and July 2014, 492 patients were recruited from 4 centers in China. Of these patients, 478 were evaluable (254 in the Cap-RT group and 224 in the Capox-RT group), with a median follow-up of 34.6 months for patients alive. The 3-year DFS rate was 71.6% in the Capox-RT group, as compared with 73.9% in the Cap-RT group (p= 0.647). No statistically significant difference was observed in OS, LRFFS, and DMFS between the two groups (3-year OS: 88.1% vs. 85.4%, p = 0.770; LRFFS: 91.9% vs. 96.1%, p = 0.079; DMFS: 76.1% vs. 74.3%, p = 0.934), but higher cumulative locoregional recurrence rate in the Cap-RT group (6.7% vs.